

Input array  $A_0 (= A)$

3	0	-4	-5	3	10	20	-13
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Output of first round  $A_1$

3	3	-4	-9	-2	13	30	7
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$$\begin{aligned}\forall i : 0 \leq i < 1 : A_1[i] &= A_0[i] \\ \forall i : i \geq 1 : A_1[i] &= A_0[i] + A_0[i - 1]\end{aligned}$$

Output of second round  $A_2$

3	3	-1	-6	-6	4	28	20
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$$\begin{aligned}\forall i : 0 \leq i < 2 : A_2[i] &= A_1[i] \\ \forall i : i \geq 2 : A_2[i] &= A_1[i] + A_1[i - 2]\end{aligned}$$

Output of third round  $A_3 (= B)$

3	3	-1	-6	-3	7	27	14
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$$\begin{aligned}\forall i : 0 \leq i < 4 : A_3[i] &= A_2[i] \\ \forall i : i \geq 4 : A_3[i] &= A_2[i] + A_2[i - 4]\end{aligned}$$